

**WHAT IS CLAIMED IS:**

1. An aqueous polymer dispersion, obtained by
  - 5 a) preparing an aqueous polychloroprene dispersion with a gel content of 0.1 wt.% - 30 wt.%, based on the polymer, prepared by polymerization at 0°C - 70°C of chloroprene and, optionally, ethylenically unsaturated monomers which can be copolymerized with chloroprene and
  - 10 b) subsequently storing the dispersion at temperatures of from 50°C - 110°C until the gel content has risen by at least 10 wt.% to 1 - 60 wt.%, based on the polymer.
- 15 2. Aqueous polymer dispersion according to Claim 1, characterized in that the polychloroprene dispersion has a particle diameter of 60 to 120 nm.
3. The aqueous polymer dispersion according to Claim 1, wherein the regulator content is preferably 0 to 0.25 mmol, based on 100 g of  
20 monomer.
4. The aqueous polymer dispersion according to Claim 1, wherein the polymerization is carried out at a temperature of 5°C to 45°C.
- 25 5. The aqueous polymer dispersion according to Claim 1, wherein the dispersion has a gel content of 0.5 - 5 wt.% before the conditioning.
6. The aqueous polymer dispersion according to Claim 1, wherein the storage of the dispersion takes place at 60°C to 90°C.

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7. The aqueous polymer dispersion according to Claim 1, wherein after the conditioning in b) the polychloroprene dispersion has a gel content of 5 to 30 wt.%.
- 5 8. A method of preparing adhesive formulations comprising adding one or more auxiliaries and/or additives selected from the group consisting of fillers, wetting agents, zinc oxide, organic thickeners, inorganic thickeners, fungicides, tackifying resins, and organic solvents to the polymer dispersion according to Claim 1.
- 10 9. An adhesive formulation comprising the aqueous polymer dispersion according to Claim 1.
10. Substrates coated with adhesive formulations according to Claim 9.
- 15 11. The method of Claim 8, wherein the fillers are selected from the group consisting of quartz flour, quartz sand, highly disperse silica, barite, calcium carbonate, chalk, dolomite and talcum.
- 20 12. The method of Claim 8, wherein the wetting agents are selected from the group consisting of polyphosphates, naphthalenesulfonic acid, ammonium polyacrylate salts and sodium polyacrylate salts.
- 25 13. The method of Claim 8, wherein the organic thickeners are selected from the group consisting of cellulose derivatives, alginates, starch, starch derivatives and polyacrylic acid.
14. The method of Claim 8, wherein the inorganic thickeners include bentonites.

15. The method of Claim 8, wherein the fungicides are selected from the group consisting of phenol derivatives, cresol derivatives, and organotin compounds.
- 5 16. The method of Claim 8, wherein the tackifying resins are selected from the group consisting colophony ester, phthalate resins, and alkylphenol resins with softening points above 110°C.
- 10 17. The method of Claim 8, wherein the organic solvents are selected from the group consisting of toluene, xylene, butyl acetate, methyl ethyl ketone, ethyl acetate, dioxane and mixtures thereof.
18. The adhesive formulation of Claim 9, comprising one or more auxiliaries and/or additives selected from the group consisting of fillers, wetting agents, zinc oxide, organic thickeners, inorganic thickeners, fungicides, tackifying resins, and organic solvents.
19. The adhesive formulation of Claim 18, wherein the fillers are selected from the group consisting of quartz flour, quartz sand, highly disperse silica, barite, calcium carbonate, chalk, dolomite and talcum.
- 15 20. The adhesive formulation of Claim 18, wherein the wetting agents are selected from the group consisting of polyphosphates, naphthalenesulfonic acid, ammonium polyacrylate salts and sodium polyacrylate salts.
- 20 21. The adhesive formulation of Claim 18, wherein the organic thickeners are selected from the group consisting of cellulose derivatives, alginates, starch, starch derivatives and polyacrylic acid.
- 25 22. The adhesive formulation of Claim 18, wherein the inorganic thickeners include bentonites.

23. The adhesive formulation of Claim 18, wherein the fungicides are selected from the group consisting of phenol derivatives, cresol derivatives, and organotin compounds.
- 5 24. The adhesive formulation of Claim 18, wherein the tackifying resins are selected from the group consisting colophony ester, phthalate resins, and alkylphenol resins with softening points above 110°C.
- 10 25. The adhesive formulation of Claim 18, wherein the organic solvents are selected from the group consisting of toluene, xylene, butyl acetate, methyl ethyl ketone, ethyl acetate, dioxane and mixtures thereof.